

APPENDIX C

SAMPLE PA NARRATIVE REPORT

This appendix provides a sample narrative report for a fictitious site. The report follows the form and content discussed Section 4.2. Example reference material for information sources cited in the report are also included.

Due to format and space constraints of this guidance document, not all references are reproduced as they should appear in a typical PA narrative report. Not included in this example report are:

- ! Full-size maps such as USGS topographic quadrangles.
- ! Copies of pertinent sections or pages of published documents. Only the title pages are included here.
- ! Original photographs accompanying the photodocumentation log.

PRELIMINARY ASSESSMENT
PALMETTO LANDFILL
PALMETTO COUNTY, SOUTH CAROLINA
TDD NO. Y9-8765-43

JUNE 10, 1991

XYZ CORPORATION

Prepared By

Joseph Brown
Joseph Brown
Project Manager

Reviewed By

Alexander Bell
Alexander Bell
PA Section Leader

Approved By

G. Washington
George Washington
Office Manager

Sample PA narrative report

Date: June 10, 1991

Prepared by: Joseph Brown, XYZ Corporation
Region 4, Atlanta, Georgia

Site: Palmetto Landfill
6250 Palmetto Drive
Palmetto County, South Carolina

EPA ID No.: SCD123456789

TDD No.: Y9-8765-43

1. INTRODUCTION

Under authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA), the U.S. Environmental Protection Agency (EPA), Waste Management Division, Region 4 conducted a Preliminary Assessment (PA) at the Palmetto Landfill site in Palmetto County, South Carolina. The purpose of this investigation was to collect information concerning conditions at the Palmetto Landfill sufficient to assess the threat posed to human health and the environment and to determine the need for additional CERCLA/SARA or other appropriate action. The scope of the investigation included review of available file information, a comprehensive target survey, and an offsite reconnaissance (May 7, 1991).

2. SITE DESCRIPTION, OPERATIONAL HISTORY, AND WASTE CHARACTERISTICS

2.1 Location

Palmetto Landfill is located at 6250 Palmetto Drive in a rural area of Palmetto County, South Carolina, just east of the town of Angleton (Figure 1). The geographic coordinates are 18° 28' 43" N latitude and 66° 07' 33" W longitude (Reference 1; Reference 2). To reach the site, travel east from the town of Angleton approximately 1.5 miles on Rt. 149, and turn left on Palmetto Drive. The site is approximately 0.25 mile from the intersection of Rt. 149 and Palmetto Drive.

Palmetto County is characterized by a mild, temperate climate. Summers are warm and humid with daily temperatures reaching 90° F or higher. The winter months are generally mild with daily average temperatures of 55° to 60° F. Mean annual precipitation is 46 inches, while net precipitation for the area is 10.87 inches (Reference 3, pp. 7,10).

2.2 Site Description

The total area of the landfill property is approximately 10 acres, of which approximately 6 acres were used for disposal of wastes (Reference 4). The landfill property is located on relatively flat terrain that slopes gently toward the northeast boundary (Reference 5) and Wildlife Creek, a small, slow flowing stream (Reference 6, p. 124). The landfill property is rectangular in shape and bordered on three sides by a perimeter ditch approximately 8 to 10 feet deep (Reference 4) (Figure 2).

Site Location Map
Palmetto County Landfill
Palmetto County, South Carolina

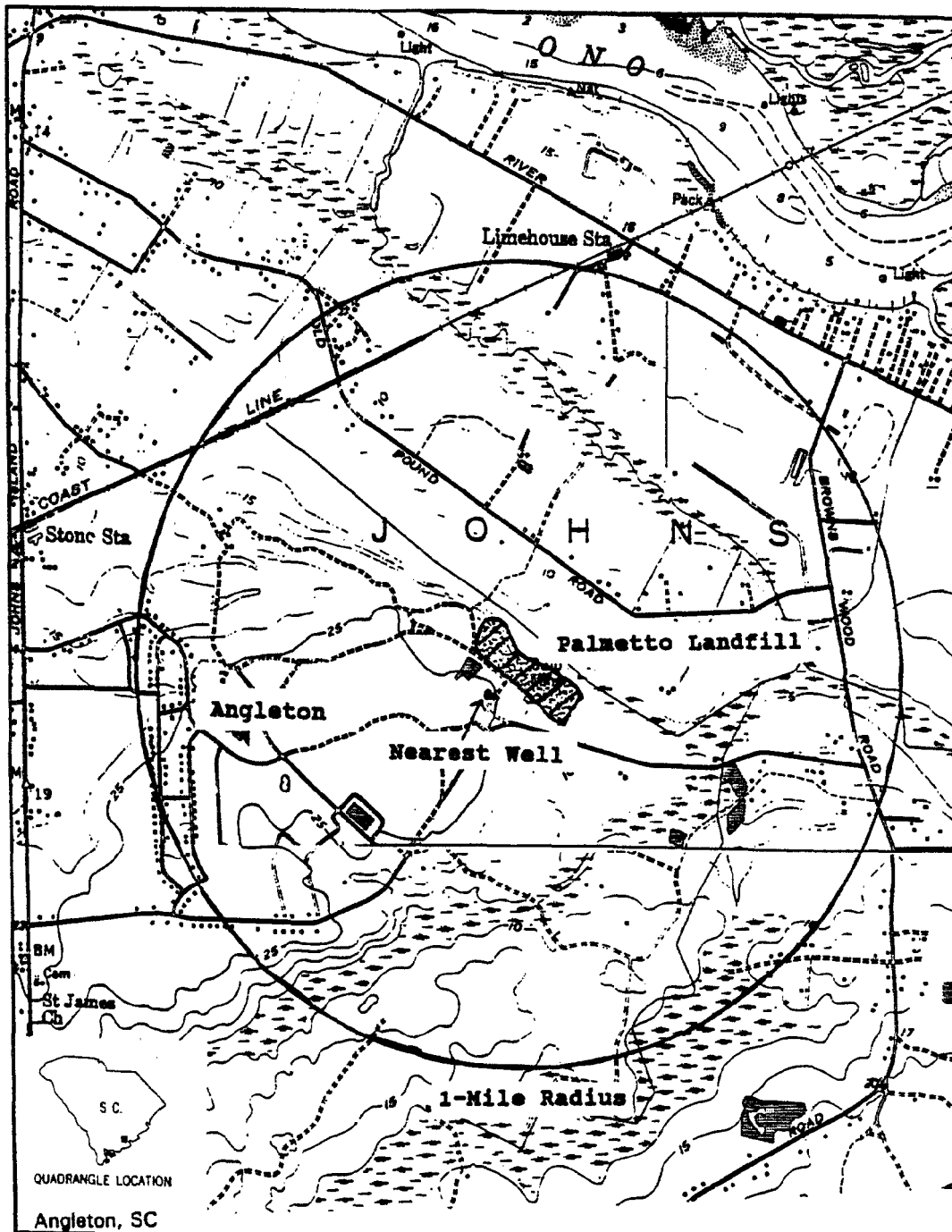


Figure 1

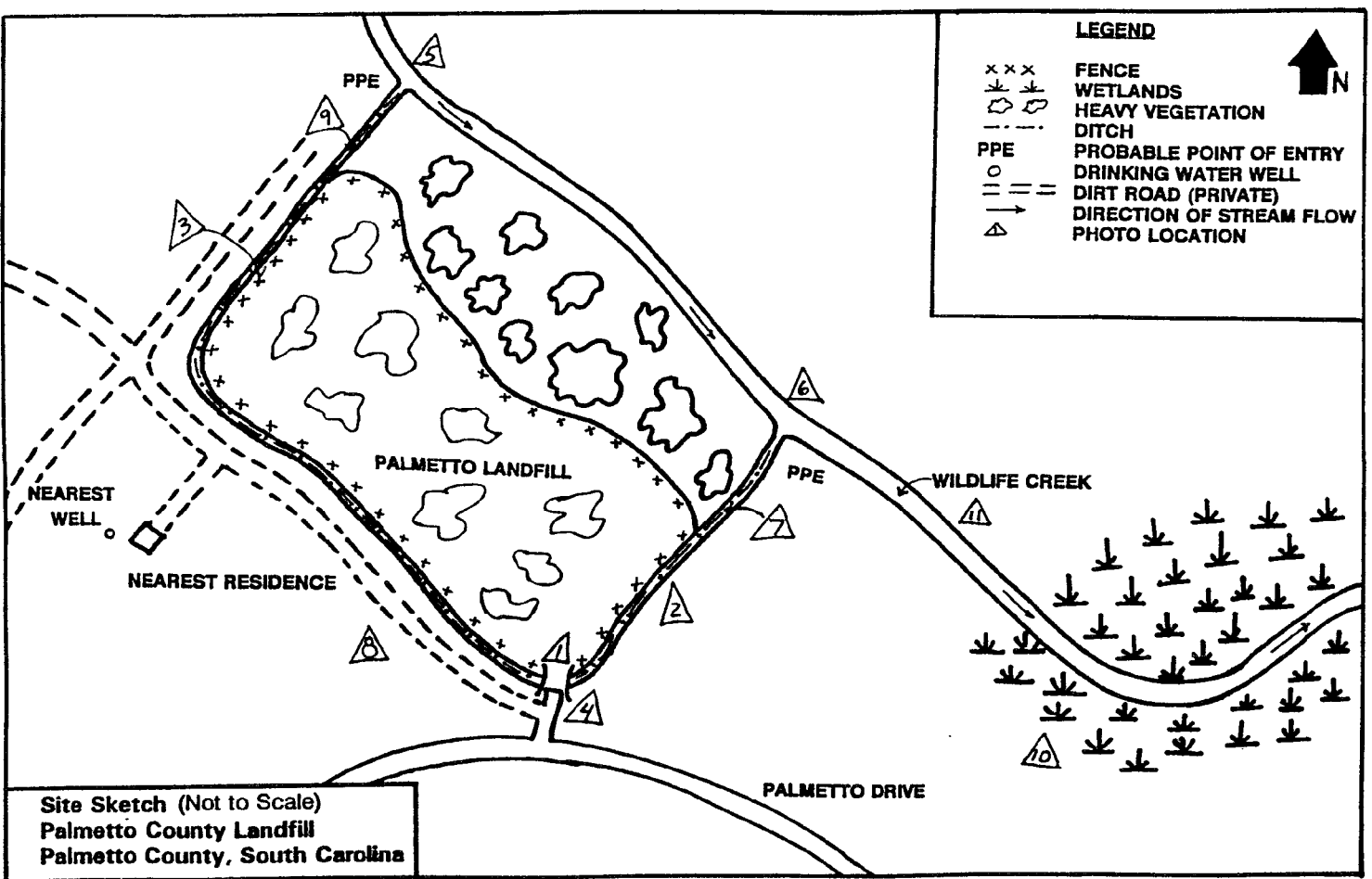


Figure 2

3

Sample PA narrative report

The original purpose of the perimeter ditch was to intercept ground water upgradient of the site and direct it around the buried waste (Reference 4). Since the ditch is only 8 to 10 feet deep, it does not fulfill this function as it does not completely transect the aquifer. It does, however, create a barrier to runoff from areas upgradient of the site. Along the banks of the perimeter ditch there is evidence of stressed vegetation (Reference 5). Water in the ditch is an orange/brown color and is oily in appearance (Reference 5; Reference 7, p. 4).

There are no buildings or other structures on the property. The perimeter of the property is fenced, the fencing appears to be in good condition, and there is a locked entrance gate across the access road to the facility (Reference 5; Reference 7, p. 3).

2.3 Operational History and Waste Characteristics

Smith and Moore Disposal Services, 1111 Main Street, Angleton, South Carolina, owns Palmetto Landfill and operated it from 1970 to 1980. The landfill was opened in April 1970 for the disposal of municipal garbage and household debris. Beginning in October 1978, the landfill accepted industrial waste on a limited basis. Smith and Moore kept no formal records of the amounts and types of wastes received. However, there is evidence indicating that the landfill received a one-time shipment of approximately 500 gallons of TCE waste (Reference 4). The common practice of disposal at Palmetto Landfill was to excavate trenches 7 to 10 feet deep, fill the trenches with waste material, and emplace a daily cover of soil. Landfilling operations were discontinued in July 1980 when the landfill reached capacity. Upon closure, a two-foot soil cover was placed over the entire landfill and seeded (Reference 4).

Palmetto Landfill operated under permit number 999-999 issued by the South Carolina Department of Health and Environmental Concerns (SCDHEC). SCDHEC personnel conducted an inspection of the landfill when it closed to ensure that all closure requirements of the permit were met. SCDHEC personnel have since inspected the landfill several times at irregular intervals. To date, no sampling or response action has taken place at Palmetto Landfill (Reference 8).

3. GROUND WATER PATHWAY

3.1 Hydrogeologic Setting

Palmetto County is in the Lower Coastal Plain Physiographic Province. Geologically this area is characterized by a wedge of overlapping formations that increase in thickness towards the coast. Pleistocene terrace deposits underlie the Palmetto County area. These deposits include the following formations (from youngest to oldest): Jacksonville, Charlestown, Peerless, and Jacob. The deposition of these formations resulted from the transgressive/regressive sequences of a glacially controlled Pleistocene sea (Reference 9, p. 12). According to the literature and local well logs, the Jacksonville, Charlestown and Peerless Formations are the only Pleistocene strata underlying the vicinity of Palmetto Landfill; only the Jacksonville produces potable water (Reference 9; Reference 10; Reference 11).

The Jacksonville Formation (5 to 25 feet thick) is composed of well-sorted, fine-grained sand and shell with interfingering layers of silt and clay. This formation is the only water supply aquifer for rural residents not served by a municipal system (Reference 10). The water is produced under water table conditions at a rate of 25 to 100 gpm (Reference 9, p. 14).

Sample PA narrative report

The Charlestown Formation consists of a sandy phosphatic limestone which has altered to a clayey, fine-grained dolomite at depth. The formation is considered to be a confining unit and has an estimated thickness of 25 to 45 feet in the southern Palmetto County area (Reference 9, p. 16).

The Peerless Formation consists of a porous, dark gray, fine-grained, fossiliferous limestone. This unit is approximately 45 to 60 feet thick, is under artesian conditions, and produces brackish water. Beneath the limestone is the Jacob Formation (60 to 105 feet thick) consisting of sand, silt and clay. The Jacob Formation also produces brackish water (Reference 9, pp. 17-19).

The Jacksonville Formation is the only water supply aquifer in the area of Palmetto Landfill. Precipitation is the primary means of recharge. Discharge other than by well production is by natural seepage (springs) and evapotranspiration. Flow direction for this surficial aquifer varies from area to area as water moves by gravity, from areas of high to low elevations. Depth to ground water varies from 3 to 15 feet below land surface (bls) in Palmetto County (Reference 9, p. 15; Reference 10). At Palmetto Landfill, the depth to ground water is approximately 10 feet, as determined from a well log of a nearby drinking water well (Reference 11).

3.2 Ground Water Targets

The majority of the population within a 4-mile radius relies on municipal water supplies taken from a reservoir, operated by the Palmetto County Water Authority (PCWA), on the Ono River 35 miles west of Angleton. There are three municipal water systems within a 4-mile radius of Palmetto Landfill, all of which purchase water from the PCWA. Residences not connected to the municipal supply system have been identified through discussions with PCWA officials (Reference 12), review of a municipal water supply distribution map (Reference 13), and verification during the reconnaissance of the immediate site vicinity (Reference 7, p.11). These residences rely on private wells completed in the Jacksonville Formation for their drinking water supply (Reference 9; Reference 10).

There are approximately 239 homes within 4 miles which use private wells for drinking water (Reference 13). At 2.7 persons per household (the average for Palmetto County) (Reference 14, p. 4), this equates to 645 residents. The nearest residence relying on a private drinking water well is approximately 300 feet southwest of the landfill (Figure 1); within a 0.25-mile radius of the landfill are 6 residences relying on private wells (Reference 7, p. 10).

3.3 Ground Water Conclusions

A release of hazardous substances from Palmetto Landfill to the Jacksonville aquifer is suspected due to the trenching method of waste disposal, shallow depth to aquifer, and documented deposition of TCE waste. Due to the relatively high conductivity (16 ft/day) (Reference 9, p. 14), potential for widespread migration of contaminants is high. Six residences within 0.25 mile are considered primary targets.

4. SURFACE WATER PATHWAY

4.1 Hydrologic Setting

Overland drainage from the site flows northeast approximately 250 feet into Wildlife Creek, which has an average flow rate of 5 to 10 cfs (Reference 6, p. 124). Drainage from the perimeter ditch around the landfill also flows into the creek (Reference 5; Reference 7, p. 3).

Sample PA narrative report

The perimeter drainage ditch which bounds most of the landfill prevents upgradient runoff from reaching the landfill surface. The ditch creates a localized drainage basin coincident with the landfill. Wildlife Creek flows approximately 3.0 miles and enters Ono River (Reference 1), which has an average flow of 1,150 cfs (Reference 6, p. 132). Approximately 16 miles downstream, the Ono River merges with the East River (Reference 6, p. 150).

4.2 Surface Water Targets

There are no drinking water intakes located within 15 downstream miles of the site. Most residents are served by a reservoir 35 miles upstream of Palmetto Landfill. Residents not served by a municipal system obtain drinking water from individual private wells (Reference 12).

Wildlife Creek and Ono River are used for recreational fishing. Aquatic species commonly caught include large mouth bass, shrimp, crabs, and clams. Recreational crawfish fishing occurs in Wildlife Creek and the surrounding wetlands (Reference 15, pp. 13, 15).

There are numerous wetlands located within 15 downstream miles of the site. The nearest wetland (approximately 250 acres, 0.5 mile frontage) is located approximately 0.1 mile downstream from the site on Wildlife Creek (Figure 1, Figure 2) (Reference 1). Two Federally designated endangered species, the Bald Eagle and the Salt Marsh Harvest Mouse, can be found in Palmetto County (Reference 16).

4.3 Surface Water Conclusions

There are indications of a release of contaminants to surface water. The banks of the perimeter ditch, which drains directly into Wildlife Creek, show signs of stressed vegetation. The water in the ditch is an orange-brown color and has an oily sheen (Reference 5; Reference 7, p. 4). There are no drinking water intakes within 15 miles downstream of the site. There are numerous wetlands along Wildlife Creek and Ono River, and two Federally designated endangered species are found in Palmetto County. Primary targets include the fishery in Wildlife Creek and wetlands associated with Wildlife Creek, and the habitats of endangered species in Palmetto County which may also be associated with Wildlife Creek.

5. SOIL EXPOSURE AND AIR PATHWAYS

5.1 Physical Conditions

When closed, Palmetto Landfill was covered by 2 feet of clean soil (Reference 4) and is currently heavily vegetated by grass, weeds, and shrubs (Reference 5; Reference 7, p. 2). The site has been closed since 1980 (Reference 4), and is totally fenced around the perimeter. There is also a locked gate across the access road to the site (Reference 5; Reference 7, p. 2).

5.2 Soil and Air Targets

There are no residents or workers onsite. The nearest residence is 300 feet to the southwest, and the nearest school is located 0.5 mile to the north of the site (Reference 7, p. 10). There are 6 residences within 0.25 mile of the site (Reference 1; Reference 7). The total population within a 4-mile radius of the site is 7,989 (Reference 18) as determined by the GEMS database (Reference 17), supplemented by a windshield survey housecount within 0.5-mile radius of the site (Reference 7, p. 10; Reference 18).

Sample PA narrative report

There is a 250-acre wetland located on Wildlife Creek approximately 0.1 mile from Palmetto Landfill (Figure 1, Figure 2) (Reference 1). There is also the possibility that terrestrial sensitive environments of the Federally designated endangered Bald Eagle and Salt Marsh Harvest Mouse habitats may be found within the boundaries of Palmetto Landfill, as the species are known to inhabit Palmetto County (Reference 16).

5.3 Soil Exposure and Air Pathway Conclusions

The soil exposure pathway appears to pose a minimal threat at Palmetto Landfill due to the 2-foot soil cover emplaced when the landfill was closed, the lack of a resident population, and fencing around the entire property. A release to the air is not suspected because the landfill is covered by 2 feet of clean soil and is heavily vegetated. In addition, during the perimeter survey, no odors were detected and there was no indication of any blowing dust or soil (Reference 7, p. 5).

6. SUMMARY AND CONCLUSIONS

Smith and Moore operated Palmetto Landfill, Palmetto County, South Carolina from 1970 to 1980. During this period, the landfill accepted an unknown quantity of municipal and industrial waste for burial in shallow trenches, including approximately 500 gallons of TCE waste. As a result of this practice, ground water in the vicinity of the landfill may have been adversely affected. Surface water also has a high potential for contamination via drainage from the perimeter ditch, which poses a threat to the environment and to human targets through food chain contamination. Due to the good condition of cover at the landfill and the rural nature of the area, the likelihood of human exposure to contaminated soil is probably minimal. No release to the air is suspected due to the heavily vegetated cover and the lack of any odors or blowing particulates during the site reconnaissance.

Sample PA narrative report

REFERENCES

1. U.S. Geological Survey, 7.5-minute topographic quadrangle maps of South Carolina: Angleton, 1963, photorevised 1983; Palmetto, 1975; Winchester, 1975; Davers, 1963.
2. U.S. Environmental Protection Agency, "Standard Operating Procedure to Determine Site Latitude and Longitude Coordinates," 1991. Calculation worksheet for Palmetto Landfill.
3. U.S. Department of Commerce, "The Climatic Atlas of the United States," 1983, pp.7,10.
4. Jennifer Doe, Manager for Smith and Moore Disposal Services, telephone conversation with Joe Brown, XYZ Corporation, May 1, 1991. Re: Palmetto Landfill Operations.
5. Joseph Brown, XYZ Corporation, Photodocumentation Log of Palmetto Landfill Preliminary Assessment, May 7, 1991.
6. A.P. Park, "The Surface Water Resources of Palmetto County, South Carolina," South Carolina Water Resources Commission Report No. 101B, 1984, pp. 124,132,150.
7. Joseph Brown, XYZ Corporation, Field Logbook No. 311 for Offsite Reconnaissance of Palmetto Landfill, TDD Y9-8765-43, May 1991.
8. John Hill, Technician for South Carolina Department of Health and Environmental Concerns, telephone conversation with Joe Brown, XYZ Corporation, May 1, 1991. Re: Remediation and Sampling at Palmetto Landfill.
9. J.P. Adams, "The Ground Water Resources of Palmetto County, South Carolina," South Carolina Water Resources Commission Report No. 99A, 1982, pp. 12, 14, 14, 16, 17, 19.
10. Donna Johnson, Driller for Johnson Drilling Co., telephone conversation with Joe Brown, XYZ Corporation, May 1, 1991. Re: Ground Water Wells in Palmetto County.
11. Johnson Drilling Company, J.J. Jones Residential Well Log, drilled March 25, 1984.
12. Mark Allen, Technician for Palmetto County Water Authority, telephone conversation with Joe Brown, XYZ Corporation, May 2, 1991. Re: Palmetto County Municipal Water Systems.
13. Palmetto County Water Authority, Municipal Water Supply Distribution System Map, April 1991.
14. U.S. Department of Commerce, Bureau of the Census, "1990 Census of Population and Housing," South Carolina.
15. A.J. Houston, "South Carolina Guide to Recreational Hunting and Fishing," South Carolina Department of Natural Resources, Wildlife and Game Division Report Number A22, 1975, pp. 13, 15.
16. U.S. Fish and Wildlife Service, "Atlantic Coast Ecological Inventory Maps, Palmetto County Panels," 1980.
17. U.S. Environmental Protection Agency, Geographical Exposure Modeling System (GEMS) database, compiled from U.S. Census Bureau 1990 data, accessed May 8, 1991.
18. Joseph Brown, XYZ Corporation, 4-mile Radius Population Calculation Worksheet, developed during the Preliminary Assessment of Palmetto Landfill, Palmetto County, South Carolina, May 8, 1991.

REF. 1

These U.S. Geological Survey 7.5 minute topographic quadrangle maps show site location and 4-mile radius:

Angleton, South Carolina
Palmetto, South Carolina
Winchester, South Carolina
Danvers, South Carolina

Note: Full-size maps are typically included as a reference in the PA narrative report. The quadrangles are only listed here.

**STANDARD OPERATING PROCEDURE
TO DETERMINE SITE LATITUDE
AND LONGITUDE COORDINATES**

Site Assessment Branch
Hazardous Site Evaluation Division
Office of Solid Waste and Emergency Response
U.S. Environmental Protection Agency
Washington, D.C.

REF 2., pg. 2

LATITUDE AND LONGITUDE CALCULATION WORKSHEET #1
WHEN USING CUSTOM RULER OR COORDINATOR (TM)

SITE: PALMETTO LANDFILL NUMBER: SCD123456789

AKA: _____ SSID: _____

ADDRESS: 6250 PALMETTO DRIVE

CITY: ANGLETON (PALMETTO) CO. STATE: SC ZIP CODE: 22222

SITE REFERENCE POINT: CENTER OF SITE

TOPO MAP: ANGLETON, SC TOWNSHIP: N/A N/S RANGE: N/A E/V

SCALE: 1:24,000 MAP DATE: 1963 SECTION: 1/4 1/4 1/4

MAP DATUM: 1927 1983 PHOTO REVISED 1983 MERIDIAN: _____

COORDINATES FROM LOWER RIGHT (SOUTHEAST) CORNER OF 7.5' MAP:

LONGITUDE: 66° 02' LATITUDE: 18° 28' 30"

COORDINATES FROM LOWER RIGHT (SOUTHEAST) CORNER OF 2.5' SUB-MAP:

LONGITUDE: 66° 07' LATITUDE: 18° 28' 30"

CALCULATIONS: LATITUDE (7.5 MINUTE QUADRANGLE MAP)

A) ALIGN THE BOTTOM OF THE SCALE WITH BOTTOM OF GRID. ALIGN THE TOP OF OF THE SCALE WITH THE TOP OF GRID. POSITION EDGE OF RULER OVER SITE REFERENCE POINT WHILE KEEPING TOP AND BOTTOM ALIGNED.

B) READ TICS ON RULER AT 1 OR 0.5 SECOND INTERVALS. (INTERPOLATE IF POSSIBLE)

C) RECORD LATITUDE: 18° 28' 43" N _____.

CALCULATIONS: LONGITUDE (7.5 MINUTE QUADRANGLE MAP)

A) ALIGN THE BOTTOM OF THE SCALE WITH RIGHT SIDE OF GRID. ALIGN THE TOP OF THE SCALE WITH THE LEFT SIDE OF GRID. POSITION EDGE OF RULER OVER SITE REFERENCE POINT WHILE KEEPING TOP AND BOTTOM ALIGNED.

B) READ TICS ON RULER AT 1 SECOND INTERVALS. (INTERPOLATE IF POSSIBLE)

C) RECORD LONGITUDE: 66° 07' 33" W _____.

INVESTIGATOR: Joseph Brown DATE: 5 MAY 1991

LATITUDE/LONGITUDE DOCUMENT RECORD FORM

REF. 2
Pg. 3

18°30' 40 000 FEET 18°28' 30" 66°09'30" 2 270 000 FEET 66°07'

Mapped, edited, and published by the Geological Survey
Control by USGS, USCGS, USACE, and South Carolina Geodetic Survey

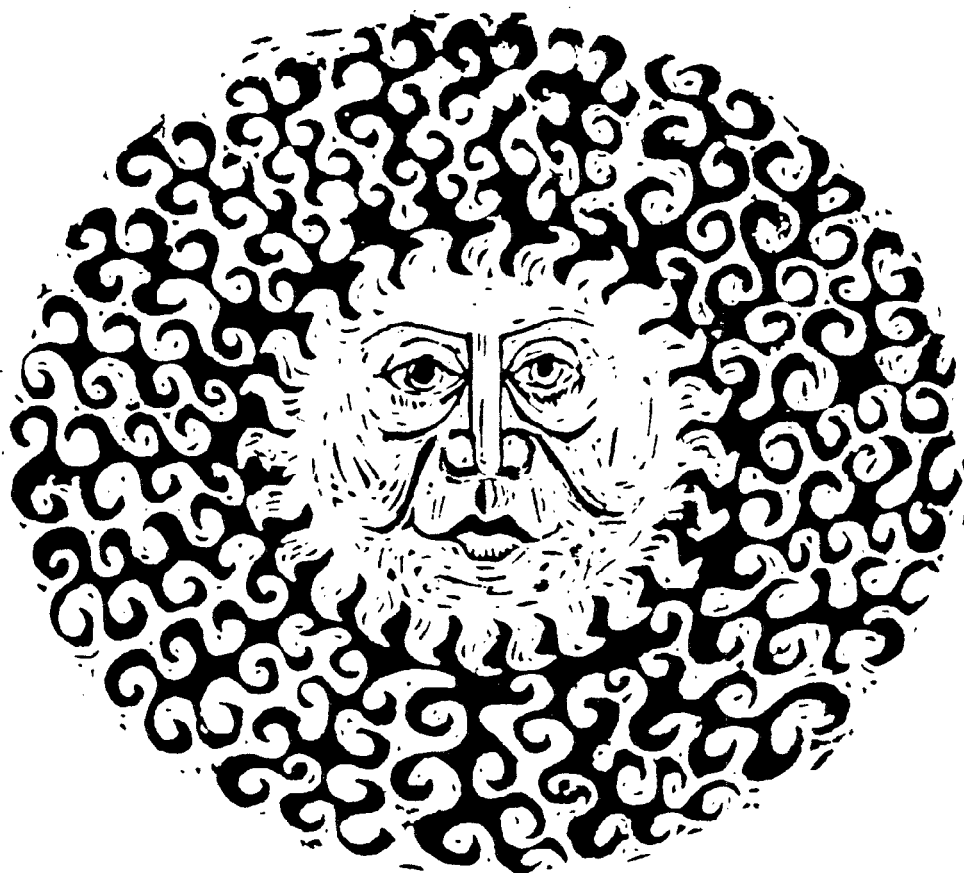
Site Name: PALMETTO LANDFILL Number: SCD 123456789

Map Name: Angleton, SC Scale: 1/24,000 Datum: 1927

Coordinates of lower right hand corner of 2.5 minute grid
Latitude 18° 28' 30" N Longitude 66° 07' —" W

00004.P43

REF. 3



CLIMATIC ATLAS OF THE UNITED STATES

XYZ CORPORATION AND SUBSIDIARIES		REF 4 TELECON NOTE
CONTROL NO: \$ 295 BAG C \$\$	DATE: May 1, 1991	TIME: 0900
DISTRIBUTION: Palmetto Landfill Palmetto County, South Carolina File TDD: Y9 - 8765-43		
BETWEEN: Jennifer Doe	OF: Smith & Moore Disposal Services	PHONE: (999) 999-9999
AND: Joe Brown, XYZ Corporation		
DISCUSSION: obtained background operating info. about Palmetto Landfill:		
1. Utilized trench and fill procedure - trenches of up to 7 to 10 feet were filled with waste materials and covered daily with soils.		
2. Two feet of clean soil was placed over the landfill as cover when the landfill was closed. The soil was seeded and trees and shrubs were planted.		
3. 8-10 foot deep perimeter ditch around the site that was to drain/divert water from upgradient of the site around buried wastes.		
4. The area used for landfilling was approximately 6 acres.		
5. Operations began April 1970. The landfill was originally opened for the disposal of municipal and household waste, but in October 1978, the landfill began accepting industrial wastes on a limited basis.		
6. No formal records were kept of the types and quantities of wastes received, but the landfill did receive a one-time shipment of approximately 500 gallons of TCE waste.		
7. Operations were discontinued in July 1980 when the landfill reached its permitted capacity.		
<i>Joseph Brown</i> Project Manager 5-1-91		

REF. 5

XYZ CORPORATION AND SUBSIDIARIES

PROJECT NOTES

PHOTO DOCUMENTATION LOG

All Photos* taken by Joe Brown, Project Manager, during site reconnaissance of Palmetto Landfill, May 7, 1991.

Number	Time	Description
1	0900	Locked gate - entrance to landfill
2	0920	Perimeter fencing - east side of site
3	0935	Perimeter fencing - west side of site
4	0945	Panoramic view of site from gate, showing heavy vegetation.
5.	1000	Probable point of entry of perimeter ditch into Wildlife Creek, northwest side
6.	1010	Probable point of entry of perimeter ditch into Wildlife Creek, southeast side
7	1040	Water in perimeter ditch, showing orange-brown color, oily sheen
8	1100	Panoramic view of site showing relatively flat terrain, gently sloping toward Wildlife Creek
9	1105	Stressed vegetation - banks of perimeter ditch
10	1130	Typical vegetation of wetlands 0.1 mile downstream of landfill
11	1135	Wildlife Creek taken just downstream of the probable point of entry.

Joseph Brown
May 7, 1991

*Original photo negatives are stored in project file - TDD 19-8765-43

REF. 6

THE SURFACE WATER RESOURCES OF PALMETTO COUNTY SOUTH CAROLINA

STATE OF SOUTH CAROLINA



**WATER RESOURCES COMMISSION
REPORT NUMBER 101B**

1984

REF. 7



LEVEL

NOTEBOOK NO. 311

TDD 49-8765-43

Palmetto Landfill

Palmetto Co, S.C.

Project Mgr: Joseph Brown

REF. 8	
XYZ CORPORATION AND SUBSIDIARIES	TELECON NOTE
CONTROL NO: \$295 BAG C \$\$	DATE: May 1, 1991
TIME: 1300	
DISTRIBUTION: Palmetto Landfill Palmetto County, South Carolina File TDD: Y9-8765-43	
BETWEEN: John Hill	OF: SCDHEC
PHONE: (222) 222-2222	
AND: Joe Brown, ^{JB} XYZ Corporation	
DISCUSSION: <p>Called to request information pertaining to past inspection history; John told me that:</p> <ol style="list-style-type: none"> 1. Site was open from April 1970 to July 1980 (industrial waste October 1978 to July 1980) and operated under permit No. 999-999. 2. No sampling or remediation has been done since the site was opened. 3. An inspection of the site was done at closure to ensure that the site was covered and access restricted according to the terms of the permit, periodic inspections have taken place since then. 4. Due to the rural location of the site SCDHEC has not considered the site a high priority for detailed investigation 	
ACTION ITEMS:	
Joseph Brown Project Manager May 1, 1991	

REF. 9

THE GROUND WATER RESOURCES OF PALMETTO COUNTY SOUTH CAROLINA

STATE OF SOUTH CAROLINA



**WATER RESOURCES COMMISSION
REPORT NUMBER 99A**

1982

REF. 10	
XYZ CORPORATION AND SUBSIDIARIES	TELECON NOTE
CONTROL NO: \$295 BAG C\$\$	DATE: May 1, 1991
TIME: 1000	
DISTRIBUTION: Palmetto Landfill Palmetto County, South Carolina File TDD: Y9-8765-43	
BETWEEN: Donna Johnson	OF: Johnson Drilling Co.
PHONE: (444) 444-4444	
AND: Joe Brown, XYZ Corporation	
DISCUSSION: Asked her about drilling in the area. She told me that Johnson Drilling Co. had drilled the majority of the water wells in Palmetto County over the last 25 yrs. In summary:	
<ol style="list-style-type: none"> 1. Jacksonville aquifer is the only aquifer in the county that produces potable water. 2. Jacksonville is the shallow aquifer, ground water is encountered at 5 to 15 feet bts. 3. Must use pumps to produce the water as the Jacksonville aquifer is too shallow to be under artesian conditions. 4. The deeper aquifers in the county produce brackish water. 	
Ms. Johnson said she had some logs of wells in the area and that she would send me one.	
ACTION ITEMS:	
Joseph Brown Project Manager May 1, 1991	

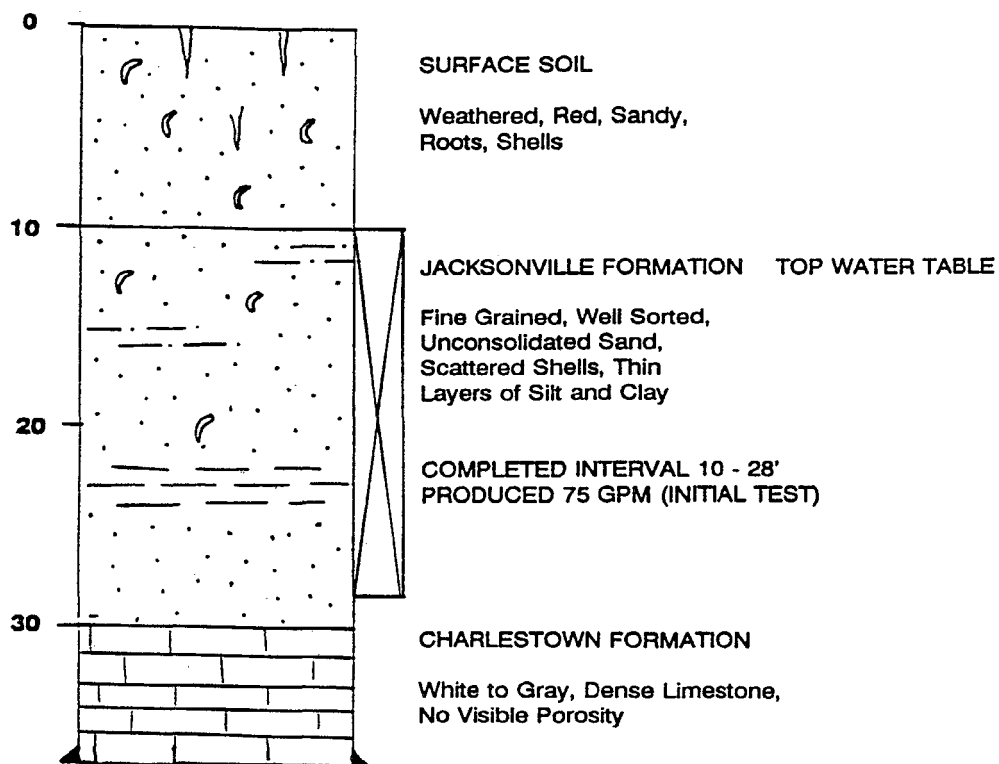
REF 11

JDC

Johnson Drilling Company
1245 Keystone Way
Angleton, South Carolina 22222

J.J. JONES HOUSEHOLD
19 Palmetto Lane
Angleton, South Carolina

Drilled March 25, 1984 by Johnson Drilling Company



REF. 12	
XYZ CORPORATION AND SUBSIDIARIES	TELECON NOTE
CONTROL NO: \$295 BAGC\$\$	DATE: May 2, 1991
TIME: 0900	
DISTRIBUTION: Palmetto Landfill Palmetto County, South Carolina File TDD: 49-8765-43	
BETWEEN: Mark Allen	OF: PCWA
PHONE: (333) 333-3333	
AND: Joe Brown, ^{JB} XYZ Corporation	
DISCUSSION: Called to request information concerning the populations served by the Palmetto Co. Water Authority, and about the overall water supply system in the vicinity of Angleton. He told me that PCWA operates a reservoir on the Ono River, approximately 35 miles upstream of where Wildlife Creek flows into the Ono. He also informed me that there were no intakes downstream of the confluence of Wildlife Creek and Ono River. The majority of the population in Palmetto County is served by the reservoir. There are three municipal water supply systems in the vicinity of Angleton; all three purchase all of their water from PCWA. Mr Allen told me that he had maps that detailed all of the municipal water supply system lines for the entire county and that I was welcome to review them.	
ACTION ITEMS: Scheduled to meet w/ Mr. Allen during the day of the site reconnaissance to review water supply system maps.	
<div style="text-align: right;"> <i>Joseph Brown</i> Project Manager May 2, 1991 </div>	

REF. 13

Municipal Water Supply Distribution System Map -- obtained from the Palmetto County Water Authority.

(In a typical PA narrative report, the full-size map would be included. Due to the format and space constraints of this guidance document, the map is not included here.)

REF. 14

Census Tracts

SOUTH CAROLINA

STANDARD METROPOLITAN STATISTICAL AREA

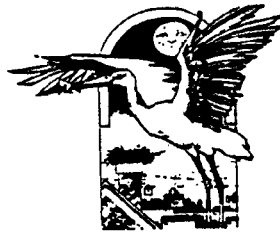
1990

Census of Population and Housing

**U.S. Department of Commerce
BUREAU OF THE CENSUS**

REF. 15

SOUTH CAROLINA GUIDE TO RECREATIONAL HUNTING AND FISHING



**DEPARTMENT OF NATURAL RESOURCES
STATE OF SOUTH CAROLINA**

**WILDLIFE AND GAME DIVISION
REPORT NUMBER A22
1975**

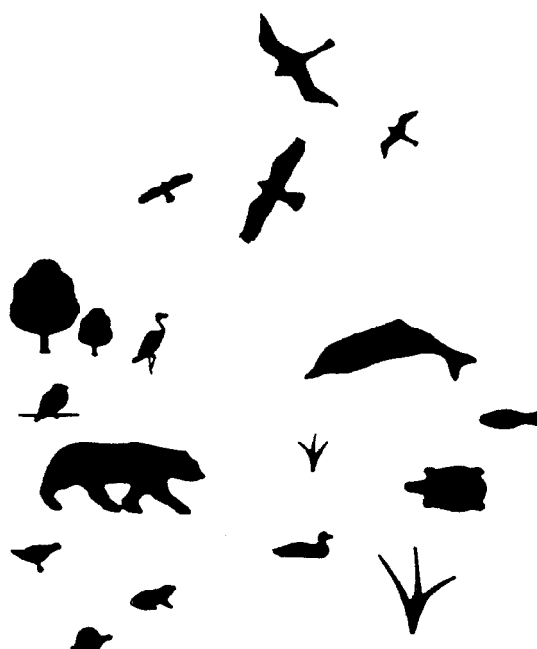
REF. 16

33301-A2-ER-111

PALMETTO COUNTY

SOUTH CAROLINA

**1:250,000-scale map of
ATLANTIC COAST
ECOLOGICAL INVENTORY**



**Produced by
U.S. FISH AND WILDLIFE
SERVICE
1980**

REF. 17

GEMS Database Printout

Palmetto Landfill

Latitude: 32:45:23

Longitude: 80:05:05

1990 Population

<u>KM</u>	<u>0.00-.400</u>	<u>.400-.810</u>	<u>.810-1,60</u>	<u>1.60-3.20</u>	<u>3.20-4.80</u>	<u>4.80-6.40</u>	<u>SECTOR TOTALS</u>
S1	0	0	188	437	2560	4732	7917
TOTALS	0	0	188	437	2560	4732	7917

Access Date: May 8, 1991

REF. 18

XYZ CORPORATION AND SUBSIDIARIES

PROJECT NOTES

4-Mile Radius Population Worksheet

Total population within a 4-mile radius of the Palmetto Landfill was determined from data obtained from the GEMS database (Reference 17) and supplemented by a house count of the 0.5-mile radius performed during the site reconnaissance (Reference 7).

Distance Category	Residences	Population*	Data Source
Onsite	0	0	Site recon.
0. to 0.25 mile	12	32	Site recon.
0.25 to 0.5 mile	15	40	Site recon.
0.5 to 1 mile	—	188	GEMS
1 to 2 miles	—	437	GEMS
2 to 3 miles	—	2560	GEMS
3 to 4 miles	—	4732	GEMS

Total = 7989

* 2.7 persons per household avg. for Palmetto Co. (Reference 14)

Joseph Brunon
5-B-91